The Relationship between Economic Growth and Health Care Expenditure in Kuwait

Walaa Ali Mohamed¹; Jarrah Motlak Dughaim Alkhaldi²; Lafi Mubarak Saad Alazmi²

ABSTRACT

Public spending on the health sector is one of the most important aspects of investment in human capital, and aims through it to achieve an increase and efficiency in the production of individuals, which is positively reflected in the gross domestic product and economic growth rates. The research problem can be formulated in the following question: What is the impact of the development of the health sector on economic growth rates in Kuwait through?. The research aims to clarify the impact of health care spending on economic growth in Kuwait, and to analyze the results in a way that may contribute to serving policy makers and decision makers in the future, so the study assumes that there is a positive impact of health spending on economic growth in Kuwait.

The results of the study indicate that the relationship between GDP and health care spending as a share of GDP reveals that there is a direct relationship and this means that the higher the value of spending on health care as a share of GDP, the higher the GDP. It was also found that the relationship between the GDP and the average per capita health expenditure is a direct relationship, this means that the higher the value per capita health expenditure, the higher the GDP.

Keywords: Health services; Health labor force; hospitals; GDP; human capital.

INTRODUCTION

Public spending on the health sector is one of the most important aspects of investment in human capital with the growth rate of per capita health spending reaching about 9.5% (World Bank Indicator, 2022), and aims through it to achieve an increase and efficiency in the production of individuals, which is positively reflected in the gross domestic product and economic growth rates (Ang and Madsen, 2011). Since working to raise the level of public health coverage for every citizen is one of the social goals that countries with different systems seek to achieve and develop various policies and programs to accomplish it, and the reason for this is the growing awareness that the health of the individual and his safety from diseases and epidemics contributes to enhancing the opportunities for achieving rapid economic development (Brach, 2010), and this is more evident in the Third World countries that seek to break the cycles of economic and social backwardness and get rid of dependence on foreign countries (Cohen

DOI: 10.21608/asejaiqjsae.2025.427090

¹ Assistant Professor, Cairo University, Egypt.

² General Agency of Practical Education, Kuwait.

and Soto, 2001), and this comes from the fact that improving health services and raising the level of public health coverage provides a great economic return (Khattab, 2009), that is manifested in stimulating the community's own capabilities and making them more suitable and responsive to the development process and thus in increasing the productive efficiency of which the human being is the main focus (Abdel Halim, 2000), on the other hand, raising the level of health care within the framework of economic and social development will contribute to the process of accelerating and influencing social progress and bringing about the required change in the structure of society (Amin and Mattoo, 2008), so that it is more capable and responsive to absorbing modern production methods and thus achieving progress and growth.

Study Problem:

The study problem can be formulated in the following question: What is the impact of the development of the health sector on economic growth rates in Kuwait through 2010-2022?

Objectives:

The research aims to clarify the impact of health care spending on economic growth in Kuwait, and to analyze the results in a way that may contribute to serving policy makers and decision makers in the future.

Study Hypothesis:

The study hypothesis is that there is a positive impact of health spending on economic growth in Kuwait.

Data and Method:

The study used both the descriptive and quantitative method in analyzing the health sector in Kuwait, analyzing the causes and indicators of development and find out the impact of the health sector on economic growth rates (Barro, 1991).

Received March 25, 2025, Accepted, April 29, 2025.

RESULTS AND DISSECTION

First: Indicators of the health sector labor force in Kuwait

1- The total health labor force:

Table (1), presents health labor force indicators in Kuwait over the period 2010-2022. It can be noted that total number of health labor force reached an average of 41.6 thousand ranging between 30.7 as minimum and 51.69 as maximum. Regression analysis results presented in Table (2), reveal that total number of health labor force followed a statistically significant increasing trend of 1.9 thousand representing 4.5% of the period's average.

2- The total number of doctors:

Studying total number of doctors reveals that reached an average of 10.6 thousand over the period 2010-2022. Results of applying simple regression analysis of total number of doctors, presented in Table (2), reveal that it followed a statistically significant increasing trend of 0.53 thousand representing 4.9% of the period's average.

3- The total number of dentists:

As for total number of dentists, results presented in Table (1), reveal that total number of dentists reached an average of 2.6 thousand ranging between 1.75 as minimum and 3.2 as maximum. Regression analysis results reveal that total number of dentists followed a statistically significant increasing trend of 0.13 thousand representing 4.9% of the period's average (Table 2).

Table 1. Health labor force indicators in Kuwait over the period 2010-2022

Indicators	Avor	Mini.	Value	Max. Value		
mulcators	Aver.	Value	Year	Value	Year	
Total number of health labor force	41.55 Thousand	30.7	2010	51.69	2022	
Total number of doctors	10.66 Thousand	7.85	2010	13.9	2022	
Total number of dentists	2.6 Thousand	1.75	2010	3.2	2022	
Total number of nursing staff	26.2 Thousand	20.2	2010	30.6	2022	
Total number of pharmacists	1.51 Thousand	0.98	2010	2.17	2022	

Source: Statistical Center for the Arab Gulf States, various issues.

Table 2. Simple regression equations for health labor force indicators in Kuwait over the period 2010-2022

Indicators	Equation	\mathbb{R}^2	Ftest	Change rate (%)
Total number of health labor force	$\hat{\mathbf{Y}}_{i} = 28.3 + 1.9 X_{i}$ (46.7)** (24.7)**	0.98	610.8**	4.5
Total number of doctors	$\hat{\mathbf{Y}}_{i} = 6.9 + 0.53 X_{i}$ (45.4)*** (27.5)**	0.98	758.1**	4.9
Total number of dentists	$\hat{\mathbf{Y}}_{i} = 1.7 + 0.13 X_{i}$ (29.7)** (17.5)**	0.96	305.8**	4.9
Total number of nursing staff	$\hat{\mathbf{Y}}_{i} = 19.6 + 0.95 X_{i}$ (26.5)** (10.2)**	0.9	104.5**	3.6
Total number of pharmacists	$\hat{\mathbf{Y}}_{i} = 0.74 + 0.11 X_{i}$ (19.7)** (23.3)**	0.98	541.6**	7.3

Change rate (%) = β / Aver. * 100

Notes: ** significance at 1% level.

Source: data collected and calculated from Statistical Center for the Arab Gulf States.

4- The total number of nursing staff:

As regards the total number of nursing staff, results presented in Table (1), reveal that total number of nursing staff (Statistical Center for the Arab Gulf States Corporation, 2022) reached an average of 26.2 thousand ranging between 20.2 as minimum and 30.6 as maximum over the period 2010-2022. Regression analysis results presented in Table (2) reveal that the total number of nursing staff followed a statistically significant increasing trend of 0.95 thousand representing 3.6% of the period's average.

5- The total number of pharmacists:

Studying the total number of pharmacists reveals that reached an average of 1510 over the period 2010-2022 ranging between 985 as minimum and 2174 as maximum. Results of applying simple regression analysis of total number of pharmacists, presented in Table (2), reveal that it followed a statistically significant increasing trend of 0.11 representing 7.3% of the period's average.

Second: Health sector indicators in Kuwait:

1- The population rate per doctor:

A- The population rate per doctor in the Ministry of Health hospitals.

Data presented in Table (3), reveal that the population rate per doctor in the Ministry of Health hospitals over the period 2010-2022 averages to 487, ranging between a minimum of 427.5 and a maximum

of 539.8. Results of applying simple regression analysis of the population rate per doctor in the Ministry of Health hospitals, presented in Table (4), reveal that it followed a statistically significant decreasing trend of 5.64 representing 1.16% of the period's average.

B- The population rate per doctor in private hospitals.

As regards the population rate per doctor in private hospitals, data presented in Table (3), reveal that the population rate per doctor in private hospitals averages to 1843, ranging between a minimum of 1596 and a maximum of 2271. Results of applying simple regression analysis of the population rate per doctor in private hospitals, presented in Table (4), reveal that it followed a decreasing trend but the achieved results did not prove statistically significant.

C- The population rate per doctor in national hospitals.

Studying the population rate per doctor in national hospitals reveals that reached an average of 391 over the period 2010-2022 ranging between 361 as minimum and 421 as maximum. Results of applying simple regression analysis of the population rate per doctor in national hospitals, presented in Table (4), reveal that it followed a decreasing trend but the achieved results did not prove statistically significant.

Table 3. The population rate per doctor in terms	of hospitals in Kuwait over the period 2010-2022
--------------------------------------------------	--------------------------------------------------

Hospitals	Avor	Mini.	Value	Max. Value		
nospitais	Aver.	Value	Year	Value	Year	
Ministry of Health hospitals	487	427.5	2022	539.8	2010	
Private hospitals	1843	1596	2018	2271	2016	
National hospitals	391	361	2021	421	2010	
Total hospitals	2721	2483	2018	3154	2016	

Source: Statistical Center for the Arab Gulf States, various issues.

Table 4. Simple regression equations for the population rate per doctor in terms of hospitals in Kuwait over the period 2010-2022

Indicators	Equation	R ²	Ftest	Change rate (%)
Ministry of Health hospitals	$\vec{Y}_{i} = 526.5 - 5.64 X_{i}$ (46.4)** (-3.95)**	0.59	15.62**	-1.16
Private hospitals	$\dot{Y}_{i} = 2009.9 - 23.9 X_{i}$ (21.0)** (-1.98) ^{n.s}	0.26	3.95	_
National hospitals	$Y_{i} = 405.6 - 2.02 X_{i}$ (43.8)** (-1.73) ^{n.s}	0.21	3.01	_
Total hospitals	$\mathbf{Y}_{i} = 2942.04 - 31.5 X_{i}$ (30.4)** (-2.58)*	0.38	6.69*	-1.16

Change rate (%) = β / Aver. * 100

Notes: ** significance at 1% level. * significance at 5% level. n.s non-significant. **Source**: data collected and calculated from Statistical Center for the Arab Gulf States.

D- The population rate per doctor in total hospitals:

As for the population rate per doctor in total hospitals, data presented in Table (3), reveal that the population rate per doctor in total hospitals reached an average of 2721 ranging between 2483 as minimum and 3154 as maximum. Regression analysis results reveal that the population rate per doctor in total hospitals followed a statistically significant decreasing trend of 31.5 representing 1.16% of the period's average.

2- The population rate per nurse staff:

A- The population rate per nurse staff in the Ministry of Health hospitals.

Data presented in Table (5), reveal that the population rate per nurse staff in the Ministry of Health hospitals over the period 2010-2022 averages to 198.9, ranging between a minimum of 181.7 and a maximum of 215.5. Results of applying simple regression analysis of the population rate per nurse staff in the Ministry of Health hospitals, presented in Table (6), reveal that it followed a decreasing trend but the achieved results did not prove statistically significant.

B- The population rate per nurse staff in private hospitals.

As regards the population rate per nurse staff in private hospitals, data presented in Table (5), reveal that the population rate per nurse staff in private hospitals averages to 614.3, ranging between a minimum of 460.4 and a maximum of 731. Results of applying simple

regression analysis of the population rate per nurse staff in private hospitals, presented in Table (6), reveal that it followed a statistically significant decreasing trend of 22.4 representing 3.65% of the period's average.

C- The population rate per nurse staff in national hospitals.

Studying the population rate per nurse staff in national hospitals reveals that reached an average of 148.5 over the period 2010-2022 ranging between 121.4 as minimum and 164 as maximum. Results of applying simple regression analysis of the population rate per nurse staff in national hospitals, presented in Table (6), reveal that it followed a statistically significant decreasing trend of 2.01 representing 1.36% of the period's average.

D- The population rate per nurse staff in total hospitals:

As for the population rate per nurse staff in total hospitals, data presented in Table (5), reveal that the population rate per nurse staff in total hospitals reached an average of 961.7 ranging between 783.1 as minimum and 1082 as maximum. Regression analysis results reveal that the population rate per nurse staff in total hospitals followed a statistically significant decreasing trend of 24.9 representing 2.6% of the period's average.

	A	Mini.	Max.	Value	
Hospitals	Aver.	Value	Year	Value	Year
Ministry of Health hospitals	198.9	181.7	2016	215.5	2013
Private hospitals	614.3	460.4	2022	731	2016
National hospitals	148.5	121.4	2020	164	2013
Total hospitals	961.7	783.1	2022	1082	2011

Table 5. The population rate per nurse staff in terms of hospitals in Kuwait over the period 2010-2022

Source: Statistical Center for the Arab Gulf States, various issues.

Table 6.	Simple	regression	equations	for the	e population	rate pe	r nurse	staff in	terms	of	hospitals	in	Kuwait
over the	period 2	2010-2022											

Indicators	Equation	\mathbb{R}^2	F _{test}	Change rate (%)
Ministry of Health hospitls	$\hat{\mathbf{Y}}_{i} = 202.6 - 0.53 X_{i}$ (31.1)** (-0.64) ^{n.s}	0.03	0.41	_
Private hospitals	$\hat{\mathbf{Y}}_{i} = 771.1 - 22.4 X_{i}$ (31.04)** (-7.16)**	0.82	**51.3	-3.65
National hospitals	$\hat{\mathbf{Y}}_{i} = 162.6 - 2.01 X_{i}$ (25.8)** (-2.54)*	0.37	*6.5	-1.36
Total hospitals	$\hat{\mathbf{Y}}_{i} = 1136.5 - 24.9 X_{i}$ (43.3)** (-7.58)**	0.83	**57.02	-2.6

Change rate (%) = β / Aver. * 100

Notes: ** significance at 1% level. * significance at 5% level. n.s non-significant. Source: data collected and calculated from Statistical Center for the Arab Gulf States.

3- The population rate per hospital's beds:

A- The population rate per hospital's beds in the Ministry of Health hospitals.

Data presented in Table (7), reveal that the population rate per hospital's beds in the Ministry of Health hospitals over the period 2010-2022 averages to 567.3, ranging between a minimum of 430.3 and a maximum of 684.1. Results of applying simple regression analysis of the population rate per hospital's beds in the Ministry of Health hospitals, presented in Table (8), reveal that it followed a statistically significant increasing trend of 18.02 representing 3.18% of the period's average.

B- The population rate per hospital's beds in private hospitals.

As regards the population rate per hospital's beds in private hospitals, data presented in Table (7), reveal that the population rate per hospital's beds in private hospitals averages to 3775.2, ranging between a minimum of 3127.7 and a maximum of 4337. Results of applying simple regression analysis of the population rate per hospital's beds in private hospitals, presented in Table (8), reveal that it followed a statistically significant increasing trend of 84.6 representing 2.24% of the period's average.

C- The population rate per hospital's beds in national hospitals.

Studying the population rate per hospital's beds in national hospitals reveals that reached an average of 478.5 over the period 2010-2022 ranging between 380.6 as minimum and 558 as maximum. Results of applying simple regression analysis of the population rate per hospital's beds in national hospitals, presented in Table (8), reveal that it followed a statistically significant increasing trend of 9.2 representing 1.92% of the period's average.

D- The population rate per hospital's beds in total hospitals:

As for the population rate per hospital's beds in total hospitals, data presented in Table (7), reveal that the population rate per hospital's beds in total hospitals reached an average of 4821 ranging between 4031 as minimum and 5484 as maximum. Regression analysis results reveal that the population rate per hospital's beds in total hospitals followed a statistically significant increasing trend of 111.9 representing 2.32% of the period's average.

Table /. The population rate per nospital's beds in terms of nospitals in Kuwait over the period 2010-	Fable 7. '	. The population rate	per hospital's beds in ter	ms of hospitals in Kuwai	t over the period 2010-202
--------------------------------------------------------------------------------------------------------	------------	-----------------------	----------------------------	--------------------------	----------------------------

Hognitals	Awan	Mini. V	Value	Max. Value		
nospitais	Aver.	Value	Year	Value	Year	
Ministry of Health hospitals	567.3	430.3	2012	684.1	2022	
Private hospitals	3775.2	3127.7	2011	4337	2022	
National hospitals	478.5	380.6	2012	558	2020	
Total hospitals	4821	4031	2012	5484	2022	

Source: Statistical Center for the Arab Gulf States, various issues.

Table 8. Simple regression	equations for the	e population rate per	r hospital's beds in	terms of hospitals in	Kuwait
over the period 2010-2022					

Indicators	Equation	\mathbb{R}^2	F _{test}	Change rate (%)
Ministry of Health hospitals	$\hat{\mathbf{Y}}_{i} = 441.1 + 18.02 X_{i}$ (31.9)**(10.4)**	0.91	**107.4	3.18
Private hospitals	$\hat{\mathbf{Y}}_{i} = 3182.8 + 84.6 X_{i}$ (27.8)** (5.8)**	0.76	**34.4	2.24
National hospitals	$\hat{\mathbf{Y}}_{i} = 414.3 + 9.2 X_{i}$ (19.3)** (3.39)**	0.51	**11.5	1.92
Total hospitals	$\hat{\mathbf{Y}}_{i} = 4038.04 + 111.9 X_{i}$ (32.6)** (7.18)**	0.82	**51.49	2.32

Change rate (%) = β / Aver. * 100

Notes: ** significance at 1% level.

Source: data collected and calculated from Statistical Center for the Arab Gulf States.

Third: Economic growth rate in Kuwait:

1- Gross domestic product (GDP):

Data presented in Table (9), reveal that GDP over the period 2000-2022 averages to US\$ 34.38 billion, ranging between a minimum of US\$ 10.7 billion and a maximum of US\$ 59.5 billion. Results of applying simple regression analysis of GDP, presented in Table (10), reveal that it followed a statistically significant increasing trend of US\$ 1.38 billion representing 4.02% of the period's average.

2- Economic growth rate:

Data presented in Table (9), reveal that the economic growth rate over the period 2000-2022 averages to 3.15%, ranging between a minimum of 0.21% and a maximum of 17.3%. Results of applying simple regression analysis of the economic growth rate, presented in Table (10), reveal that it followed a decreasing trend but the achieved results did not prove statistically significant.

Forth: Measuring the impact of the health sector on economic growth in Kuwait

1- The impact of the health sector on economic growth in Kuwait (2000-2022):

In this section, a model will be formulated to measure the impact of the health sector on economic growth and analyze the relationship between them.

The mathematical formula for the standard model:

$$Y = F(X_1, X_2)$$

Where:

Y: Average GDP per capita (economic growth rate).

X₁: Health care spending as a share of GDP.

X₂: Average per capita health spending.

2- Unit root tests:

It is an initial test in estimating and measuring the relationships between economic variables within the framework of long-run time series, to ensure the stationary of the time series, there are several tests to determine the stationary of time series, but the most important and widely used is the Dickey-Fuller test.

Dickey-Fuller test (ADF):

For the purpose of testing the unit root on the model variables, the test was conducted in Table (11), which shows that the study variables are not stationary, as indicated by the calculated (tau) values that were greater than the critical values at a significance level (5%), and thus we accept the null hypothesis that confirms that the time series of variables contain a unit root, i.e. they are not stable at the level, and when taking the first differences of the time series, it reveals that the time series are stable, which means rejecting the null hypothesis.

Table 9. Economic growth rate in Kuwait over the period 2000-2022

Indicators	A	Mini.	Value	Max. Value		
mulcators	Aver.	Value	Year	Value	Year	
Gross domestic product (GDP)	34.38	10.7	2001	59.5	2006	
Economic growth rate %*	3.15	0.21	2001	17.3	2003	

* Figures published by the World Bank.

Source: Statistical Center for the Arab Gulf States, various issues.

Table 10. Simple regression equations for Economic growth rate in Kuwait over the period 2000-2022

variable	Equation	\mathbb{R}^2	Ftest	Change rate (%)
Gross domestic product (GDP)	$\hat{\mathbf{Y}}_{i} = 17.8 + 1.38 X_{i}$ (4.05)** (4.31)**	0.47	18.61**	4.02
Economic growth rate %*	$\hat{\mathbf{Y}}_{i} = 6.92 - 0.24 X_{i}$ (3.36)** (-1.59) ^{n.s}	0.11	2.55	-

Change rate (%) = β / Aver. * 100

Notes: ** significance at 1% level. n.s non-significant.

Source: data collected and calculated from Statistical Center for the Arab Gulf States.

		With interc	With intercept (η_{μ})		With intercept and trend (η _{μι})		
	Variable	Test statistic	Test statistic at 5% level	Test statistic	Test statistic at 5% level	case of integration	
v	Level	-1.684	-3.467	-1.368	-3.532	Not stable	
1	Difference D1	-3.354	-3.211	-	-	stable I(1)	
v	Level	2.201	-3.023	-2.671	-3.002	Not stable	
Λ1	Difference D1	-	-	-4.924	-3.314	stable I(1)	
v.	Level	0.236	-3.016	-3.264	-3.713	Not stable	
A2	Difference D1	-5.436	-3.012	-5.577	-3.530	Not stable I(1)	

Table 1	1. Unit ro	ot tests fo	or GDP	per	capita,	health	care	spending	, as a	share	of	GDP	and	average	per	capita
health s	pending u	sing the A	lugmen	ted l	Dickev-	-Fuller	test									

Source: Calculated from Appendixes Table (1&2) using the Eviews 9.5 econometrics package.

3- Co-integration test: Johansen method:

The impact value and the maximum eigenvalue test will be tested, through which the null hypothesis indicating the absence of co-integration vectors can be accepted at a significance level of 0.05. Table (12) shows:

A- Eigenvalue test: The results of the eigenvalue indicate the acceptance of the alternative hypothesis (H₁: $\mu \neq \mu 0$), which indicates the existence of a cointegration relationship, because the eigenvalue statistic value is equal to 41.62, which is greater than the eigenvalue of the test at a significance level of 0.05, which is equal to 40.48. The null hypothesis (H₀ : $\mu =$ μ 0) is also rejected, which indicates the absence of any co-integration relationship between economic growth and the study variables, because the eigenvalue 18.11 is less than the critical value of the eigenvalue test 25.33 at a significance level of 0.05, which indicates the absence of any co-integration relationship between the model variables.

B- Maximum eigenvalue test: Through this test, we reached the rejection of the null hypothesis (H₀ : $\mu = \mu 0$), which indicates the absence of any relationship for co-integration, because the value of the maximum eigenvalue statistic is 24.66, which is less than the critical value for the maximum eigenvalue test at a significance level of 0.05, which is equal to 25.64.

 Table 12. Co-integration test using Johansen method for GDP per capita, health care spending as a share of GDP and average per capita health spending

variables	hypothesis		critical value	Maximum	critical
	• •	Elgenvalue	5%	eigenvalue	value 5%
		Value	Year	Value	Year
V V V	$H_0: \mu = \mu 0$	41.62	40.48	24.66	25.64
$1, \mathbf{A}_1, \mathbf{A}_2$	H_1 : $\mu \neq \mu 0$	18.11	25.33	10.49	18.93
~ ~					

Source: Calculated by using the Eviews 9.5 econometrics package.

According to achieved results, the research offers the following **recommendations:**

- Devoting high attention to increasing increase spending on the healthcare sector in Kuwait, given the importance of health in increasing individual productivity and stimulating economic growth.
- Encourage investment in the healthcare sector and prioritize the human resources working in this sector.
- Government intervention is essential to implement policies to increase healthcare spending and build a more productive society to support economic growth and development.

CONCLUSION

It can conclude the relationship between GDP and health care spending as a share of GDP is a direct relationship, this means that the higher the value of spending on health care as a share of GDP, the higher the GDP.

Also it can be concluded that the relationship between the GDP and the average per capita health expenditure is a direct relationship, this means that the higher the value per capita health expenditure, the higher the GDP

REFERENCES

- Abdel Halim, O. 2000. Analysis of the phenomenon of increasing public spending on health services and its economic effects. J. Commer. Res. 22.
- Amin, M. and A. Mattoo. 2008. Human capital and the changing structure of the Indian economy. Policy Research Working Paper Number 4576, the World Bank.
- Ang, J.B. and J.B. Madsen. 2011. Can second-generation endogenous growth models explain the productivity trends and knowledge production in the Asian miracle economies?. Rev. Econ. Stat. 93: 1360-1373.
- Barro, R.J. 1991. Economic growth in a cross section of countries. Q. J. Econ. 106: 407-443.
- Brach, J. 2010. Technological readiness in the Middle East and North Africa-Implications for Egypt. GAGA WP 155/2010.
- Cohen, D. and M. Soto. 2001. Growth and human capital: good data, good results, Technical Papers No 179, OECD Development Centre OECD, Paris.
- Khattab, M. 2009. Spending Priorities in Egypt and Arab Countries, Cairo.
- Statistical Center for the Arab Gulf States Corporation. 2022. <u>https://gccstat.org/ar/statistic/statistics/health</u>
- World
 Bank
 Indicator.
 2022.

 https://humancapital.worldbank.org/en/indicator/WB
 H
 CP_HEALTH_EXP

periou (2010-2022)				
	Coefficient	Std. Error	t-Statistic	Prob.
С	28632.3	5125.3	5.214	0.0000
X1	6.832	6.94	0.842	0.2142
R-squared	0.042	Mean dependent var		31276.2
Adjusted R-squared	-0.091	S.D. dependent var		10624.3
S.E. of regression	10685.2	Akaike info criterion		22.45
Sum squared resid	2.38E+09	Schwarz criterion		22.69
Log likelihood	-206.3	Hannan-Quinn criter.		22.56
F-statistic	0.934	Durbin-Watson stat		0.342
Prob(F-statistic)	0.3181			

Table 1. The relationship between GDP and health care spending as a share of GDP in Kuwait over the period (2010-2022)

Source: Calculated by using the Eviews program.

 Table 2. The relationship between GDP and average per capita health expenditure in Kuwait over the period

 (2010-2022)

	Coefficient	Std. Error	t-Statistic	Prob.	
С	25345.1	8632.7	2.91	0.010	
X2	31.54	34.28	0.928	0.375	
R-squared	0.043	Mean dependent var		31276.2	
Adjusted R-squared	-0.092	S.D. dependent var		10624.3	
S.E. of regression	11752.80	Akaike info criterion		23.3	
Sum squared resid	2.53E+09	Schwarz criterion		22.6	
Log likelihood	-206.6	Hannan-Quinn criter.		23.4	
F-statistic	0.867	Durbin-Watson stat 0.41			
Prob(F-statistic)	0.324				

Source: Calculated by using the Eviews program.

الملخص العربى

العلاقة بين النمو الاقتصادي ونفقات الرعاية الصحية في الكويت ولاء على محمد أحمد؛ جراح مطلق دغيم الخالدي ؛ لافي مبارك سعد العازمي

> يعتبر الإنفاق العام على قطاع الصحة يعد من أهم جوانب الاستثمار في رأس المال البشري، ويتم من خلاله إلى تحقيق زيادة وكفاءة في إنتاجية الأفراد، الأمر الذي ينعكس إيجابياً على زيادة الناتج المحلي الإجمالي ومعدلات النمو الاقتصادي، وتكمن مشكلة البحث في السؤال التالي: ما هو أثر تطوير قطاع الصحة على معدلات النمو الاقتصادي في الكويت؟ ويهدف البحث إلى توضيح أثر الإنفاق على الرعاية الصحية على النمو الاقتصادي في الكويت، وتحليل النتائج بشكل قد يساهم في خدمة صناع الصياسات ومتخذي القرار في المستقبل، لذا تفترض الدراسة أن هناك أثراً إيجابياً للإنفاق على الصحة على المحة على النمو الاقتصادي في الكويت.

وأظهرت النتائج وجود علاقة طردية بين الناتج المحلي الإجمالي والإنفاق على الرعاية الصحية كنسبة من الناتج المحلي الإجمالي وهذا يعني أنه كلما ارتفعت قيمة الإنفاق على الرعاية الصحية كنسبة من الناتج المحلي الإجمالي كلما ارتفع الناتج المحلي الإجمالي. كما تبين أن العلاقة بين الناتج المحلي الإجمالي ومتوسط الإنفاق الصحي للفرد هي علاقة طردية وهذا يعني أنه كلما ارتفعت قيمة الإنفاق الصحي للفرد كلما ارتفع الناتج المحلي الإجمالي.

الكلمات المفتاحية: الخدمات الصحية؛ القوى العاملة الصحية؛ المستشفيات؛ الناتج المحلى الاجمالى؛ رأس المال البشرى.